

# MILITARY FUNDAMENTALS FOR DA CIVILIANS (Lesson 3)



***AFSC - On the Line***



**In another triumph for cost effectiveness, the Army announced this week that it has cancelled the \$1.4 Billion "Grizzly" and "Wolverine" Engineer Vehicle Programs in favor of the \$199.99 "Chipmunk".**

# Army Doctrine

**Doctrine is the concise expression of how Army forces contribute to unified action in campaigns, major operations, battles, and engagements. While it complements joint doctrine, Army doctrine also describes the Army's approach and contributions to full spectrum operations on land. Army doctrine is authoritative but not prescriptive. Where conflicts between Army and joint doctrine arise, joint doctrine takes precedence.**

**The primer on the U.S. Army's Doctrine? FM 3-0**

# Doctrine On-Line

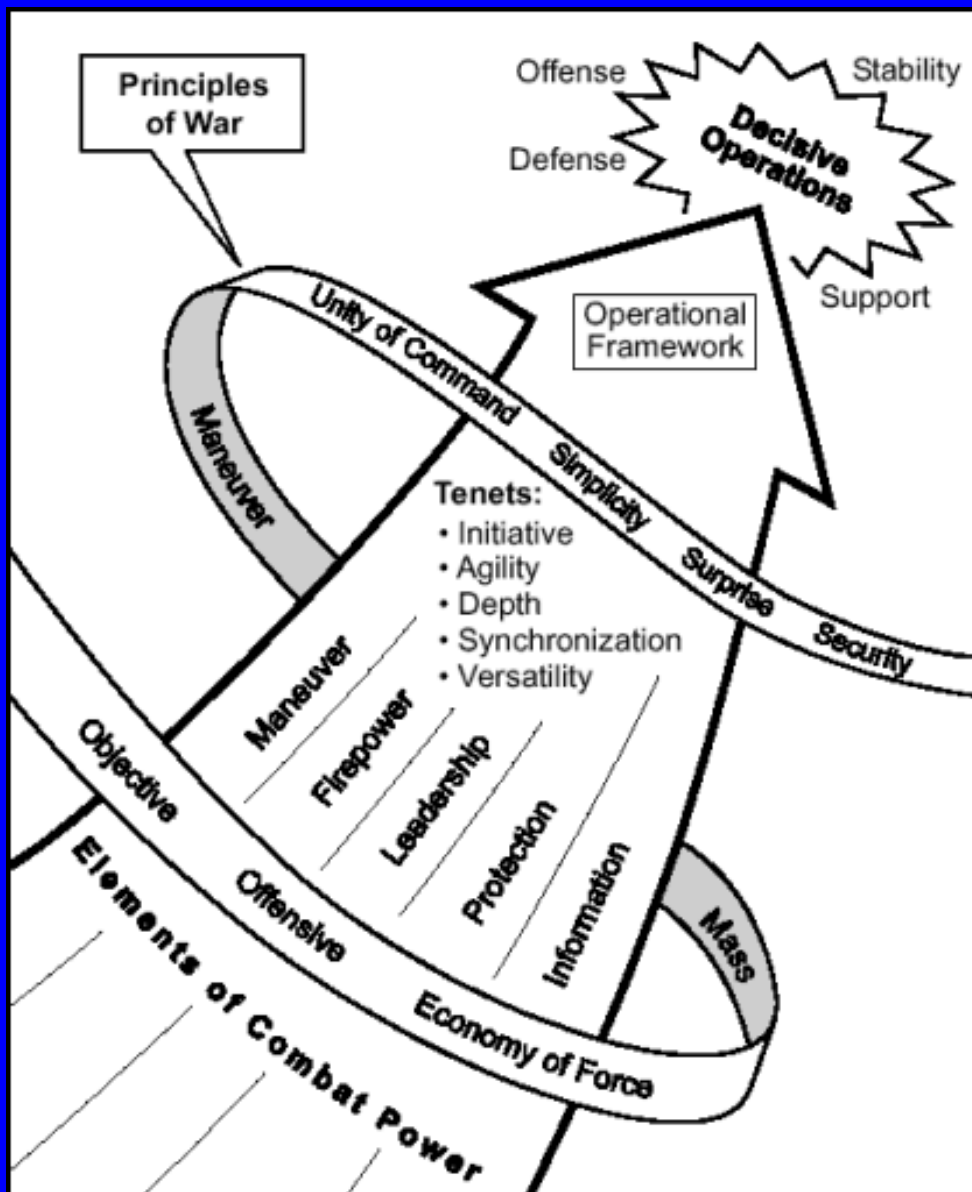
**Three Key Web Sites for Doctrine and Regulations:**

**[www.usapa.army.mil](http://www.usapa.army.mil) -- Army regulations, DA Pams,**

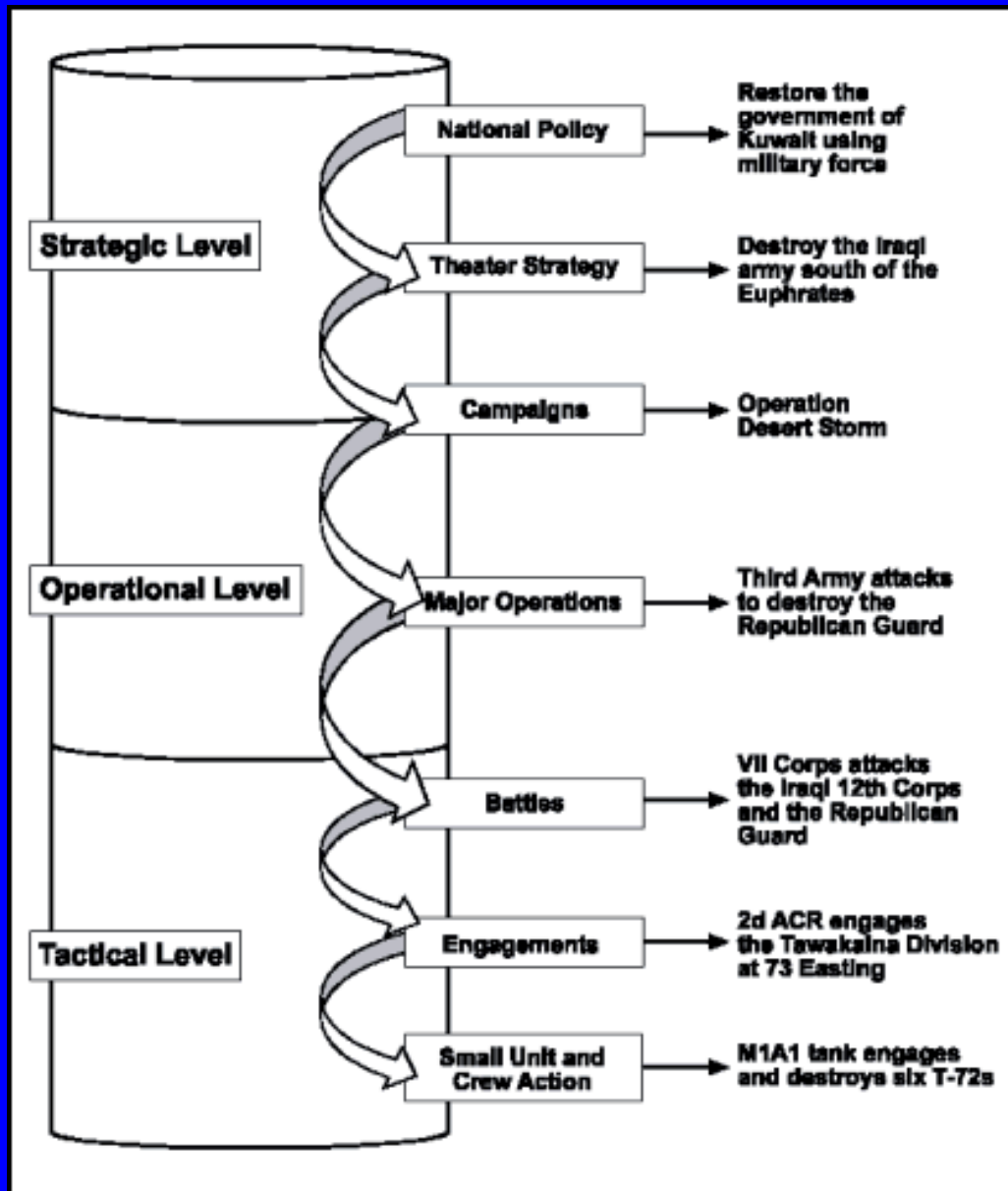
**[www.adtdl.army.mil](http://www.adtdl.army.mil) -- Field Manuals and other.**

**[www.cgsc.army.mil](http://www.cgsc.army.mil) -- Course references; updated a**

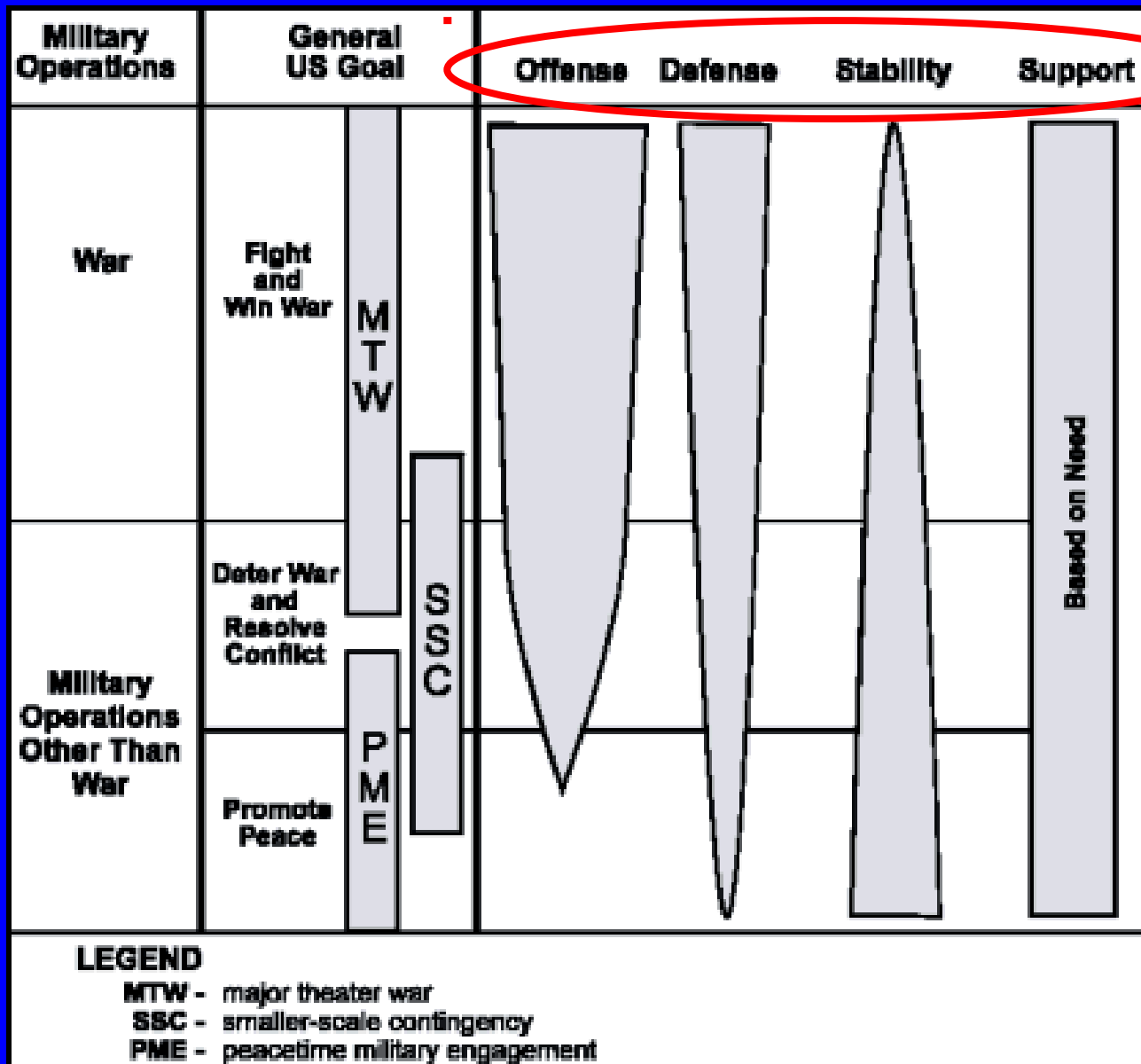
# Principles of War



# Levels of War



# Types of Operations





# Operations Other Than War (OOTW)

Noncombatant Evacuation

Humanitarian Assistance/Disaster Relief

Security Assistance

Counterdrug Ops

Combating Terrorism

Peacekeeping Ops

Peace Enforcement

Show of Force

Spt for Insurgencies/Counterinsurge





# Historical View of Army Doctrine

**“One of the serious problems in planning against Army doctrine is that the Americans do not read their manuals, do they feel any obligations to follow their doctrine.”**  
**- Soviet Analyst**

**“If we don’t know what we are doing, the enemy certainly can’t anticipate our future actions.”**  
**- Anon U.S. Officer**

# Logistics Tenets

- **Integration**
- **Responsiveness**
- **Simplicity**
- **Flexibility**
- **Attainability**
- **Sustainability**
- **Survivability**
- **Economy**

# Levels of Logistics

## Strategic Level

- Mobilization
- Requirements Determination
- Acquisition
- Prepositioning
- Strategic Mobility
- Reconstitution
- Demobilization

▪ Links the nations economic base to military operations

▪ AMC, DLA, GSA

## Operational Level

- Reception of Army Forces
- Positioning Facilities
- Management/Redeployment of Units and Soldiers
- Distribution Management
- Reconstitution of ARFOR Capabilities

▪ Links the strategic and tactical levels

▪ Identify requirements to strategic level and coordinate distribution

▪ Look forward to tactical level to ensure requirements are met.

▪ TSC, ISE, ASG

## Tactical

- Man
- Arm
- Fuel
- Fix
- Move
- Sustain the Soldier and his Systems

▪ Comprises all activities necessary to support battles and engagements

▪ COSCOM / DISCOM

# Classes of Supply

**Table 6-1. Classes of Supply**

<b>Class</b>	<b>Supplies</b>
<b>I</b>	<b>Subsistence, gratuitous health and comfort items.</b>
<b>II</b>	<b>Clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, unclassified maps, administrative and housekeeping supplies and equipment.</b>
<b>III</b>	<b>Petroleum, fuels, lubricants, hydraulic and insulating oils, preservatives, liquids and gases, bulk chemical products, coolants, deicer and antifreeze compounds, components, and additives of petroleum and chemical products, and coal.</b>
<b>IV</b>	<b>Construction materials, including installed equipment, and all fortification and barrier materials.</b>
 <b>V</b>	<b>Ammunition of all types, bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and associated items.</b>
<b>VI</b>	<b>Personal demand items (such as health and hygiene products, soaps and toothpaste, writing material, snack food, beverages, cigarettes, batteries, and cameras—nonmilitary sales items).</b>
 <b>VII</b>	<b>Major end items such as launchers, tanks, mobile machine shops, and vehicles.</b>
<b>VIII</b>	<b>Medical materiel including repair parts peculiar to medical equipment.</b>
<b>IX</b>	<b>Repair parts and components to include kits, assemblies, and subassemblies (repairable or non-repairable) required for maintenance support of all equipment.</b>
<b>X</b>	<b>Material to support nonmilitary programs such as agriculture and economic development (not included in Classes I through IX).</b>
<b>Miscellaneous</b>	<b>Water, salvage, and captured material.</b>

# Building up Supplies

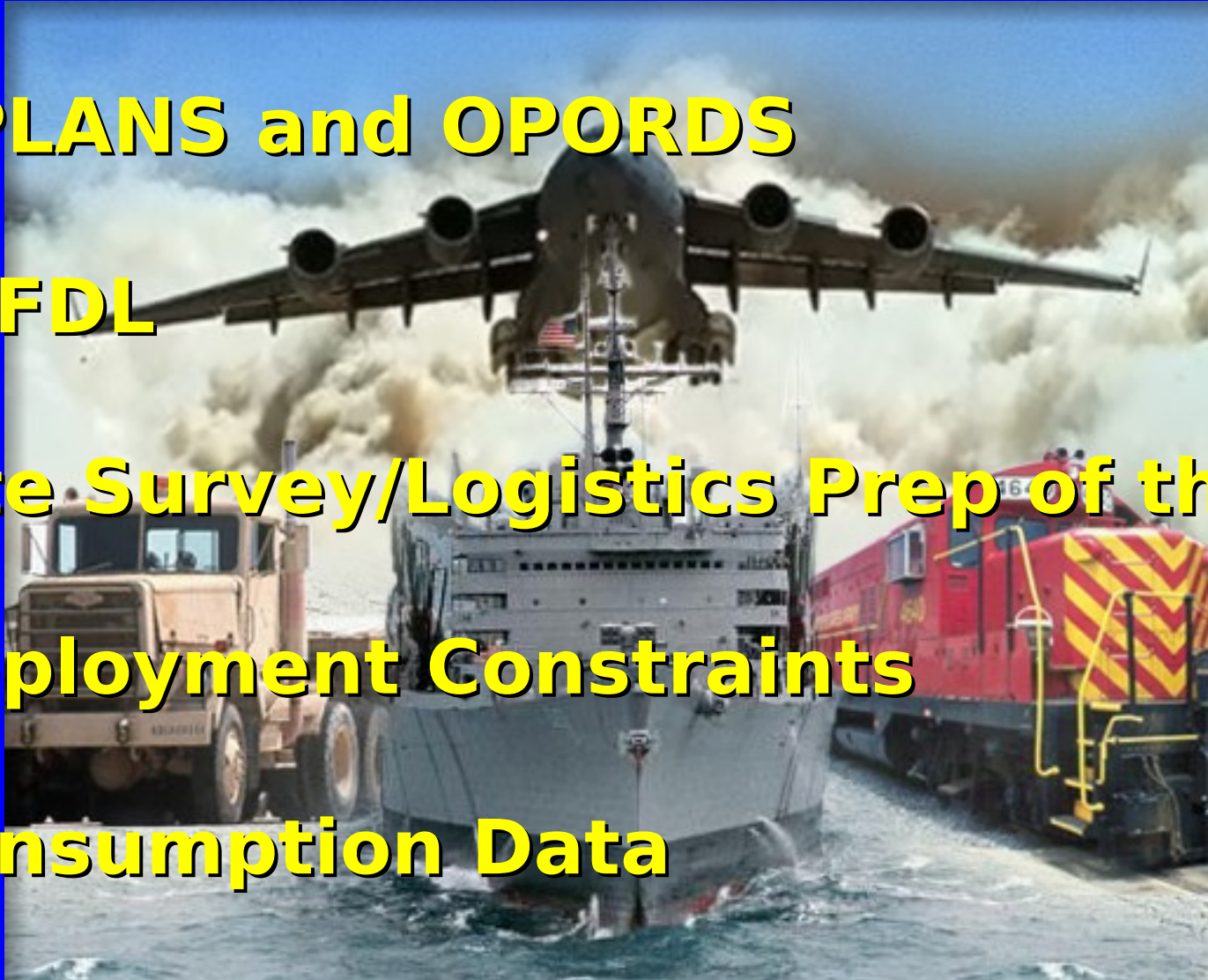
**Stockage Levels**

**Days of Supply**

Class	DS	GS
I	3	7
II	3	7
III (pkg)	3	7
III (bulk)	1	3
IV	2	4
V	3	7
VI	3	7
VII	1	
VIII	3	10
IX	15	30

# How We Get There - Deploying

- OPLANS and OPORDS
- TPFDL
- Site Survey/Logistics Prep of the Batt
- Deployment Constraints
- Consumption Data





# Army Vision - Deployment

## Deployment Time Lines:

**Brigade - 4 days**

**Division - 5 days**

**5 Divisions - 30 days**

## Unit Size?

**Brigade 904 Vehicles**

**DISCOM 502 Vehicles**

**AR Div 1,660 Tracks**

**3,603 Wheels**



**And lots of  
cargo!**



# Major Deployment Transp

- C-130
- C-141
- C-17
- C-5



# C-130



**463L Pallet**

**108x88  
9,000 lb**



<b>Pax</b>	<b>91/74</b>
<b>Load</b>	<b>45,000 Lbs</b>
	<b>32,000 on</b>
<b>Int Dim:</b>	<b>Ht Wd</b>
<b>inches</b>	<b>102 105</b>
<b>463L Pallets</b>	<b>6</b>
<b>Runway</b>	<b>P 4,700 ft</b>
	<b>W 3,000 x</b>

# C-130

## (Cont'd)

**Theater Workhorse - Very Small**



**6K Forklift**



# C-17



<b>Pax</b>	<b>170/102</b>		
<b>Load</b>	<b>170,000 Lbs</b>		
<b>Int Dim:</b>	<b>Ht</b>	<b>Wd</b>	<b>Ln</b>
<b>inches</b>	<b>142</b>	<b>196</b>	<b>812</b>

<b>463L Pallets</b>	<b>18</b>
<b>Runway</b>	<b>P 5,900 ft</b>
	<b>W 5,000 x 90</b>

# C-141

<b>Pax</b>	<b>186/110</b>
<b>Load</b>	<b>70,000 Lbs</b>
<b>Int Dim:</b>	<b>Ht    Wd    L</b>
<b>inches</b>	<b>103   111   1,0</b>
<b>463L Pallets</b>	<b>13</b>
<b>Runway</b>	<b>P 7,600 ft</b>
	<b>W 3,000 x 90</b>



**(Scheduled to retire in FY**



# C-5

<b>Pax</b>	<b>74</b>
<b>Load</b>	<b>256,000 Lbs</b>
<b>Int Dim:</b>	<b>Ht Wd Ln</b>
<b>inches</b>	<b>156 144 1,454</b>
<b>if</b>	<b>&lt;108 216</b>

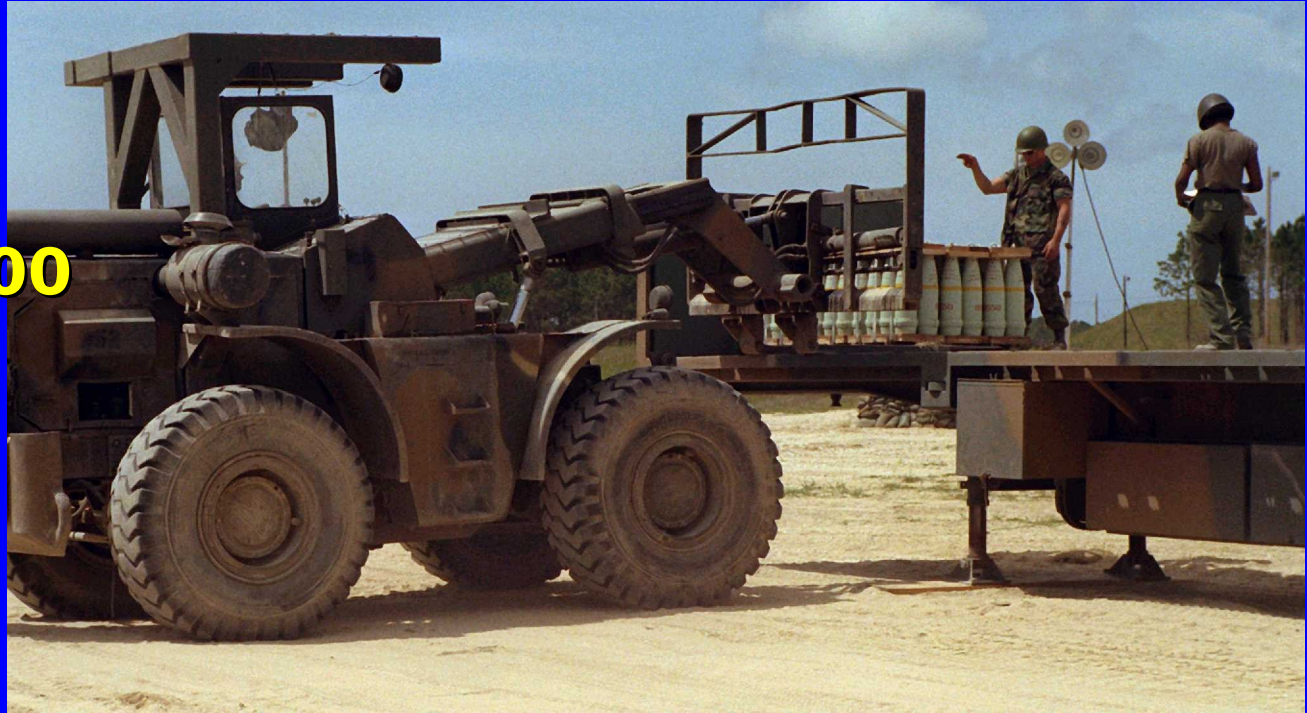


**Hauls Tanks, but  
VERY Unreliable (50%**



# 10K Forklift

**Length**     **277**  
**Width**     **107**  
**Height**    **137**  
**Wt**         **35,400**



**Cage must come off to fit in C-141**

**Won't Fit in C-130 - Prime piece of MHE**



# M998 Truck - HMMWV



## ◀ M-998 HMMWV

Type: Multipurpose wheeled vehicle  
Entered Army service: 1985  
Specifications: (basic model)  
Length: 15 ft  
Weight: 5,200 lbs  
Maximum speed: 65 mph  
Range: 300 mi



# MTV / LMTV

## M1078 Light Medium Tactical Vehicle



### ◀ FMTV

Type: Family of medium tactical vehicles

Entered Army service: 1996

Variants in service: M-1078/

1079/1081 Light Medium tactical

Vehicle (LMTV), M-1082-1095

Medium Tactical Vehicle (MTV)

Specifications: (M-1078

Cargo Truck)

Length: 21 ft

Weight: 16,499 lbs

Range: 400 mi

Crew: 1



# M-977 HEMTT

## Heavy Expanded Mobility Tactical Vehicle

### ► M-977 HEMTT

Type: Heavy Expanded Mobility Tactical Truck

Entered Army service: 1983

Variants in service: M-977/  
978/983/984/985

Specifications: (basic model)

Length: 33 ft 4.5 in

Weight: 62,000 lbs

Range: 300 mi

Crew: 2



# M2/M3 Bradley Fighting Vehicle



## ◀ **M2/M3 Bradley**

Type: Infantry/cavalry fighting vehicle

Entered Army service: 1981

Variants in service: M2A1/A2 IFVs,  
M3A1/A2 CFVs

Specifications: (M2)

Length: 21 ft 2 in

Weight: 50,000 lbs

Main gun: 25mm chain gun

Crew: 3

# M1 Abrams

## Main Battle Tank



### ◀ M1 Abrams

Type: Main battle tank

Entered Army service: 1980

Variants in service: M1, M1A1, M1A2

Specifications:

Length: 32 ft 0.5 in

Weight: 120,000 lbs

Speed: 45 mph

Main gun: 120 mm

Crew: 4







# Anti-Tank Weapons

## ▲ **Javelin**

Type: Anti-tank missile  
Entered Army service: 1996  
Specifications:  
Length overall: 3 ft 6 in  
Weight: 26.1 lbs  
Range: 1.4 mi  
Crew: 2

## ▶ **BGM-71 TOW**

Type: Wire-guided anti-tank missile  
Entered Army service: 1970  
Variants in service: TOW 2/2A/2B  
Specifications: (Basic TOW)  
Length overall: 3 ft 10 in  
Weight: 173 lbs  
Range: 2.5 mi  
Crew: 2



# M113 Armored Personnel Carrier



## **M113 FAMILY OF VEHICLES**

Type: Armored personnel carrier/mortar carrier/command post vehicle

Entered Army service: 1960

Variants in service: M113A2, M113A3, M106, M577, M1064A3

Specifications: (M113A3)

Length: 17 ft 5 in

Weight: 27,000 lbs

Range: 300 mi

Crew: 2



# Stryker IAV



## ◀ Stryker

Type: Interim armored vehicle

Entered Army service: 2001

Variants in service: Infantry carrier, engineer vehicle, command-and-control vehicle

Specifications: (ICV)

Length: 22 ft 9 in

Weight: 36,240 lbs

Range: 312 miles

# M992 Ammo Carrier



<b>Length</b>	<b>260</b>
<b>Width</b>	<b>124</b>
<b>Height</b>	<b>129</b>
<b>Wt</b>	<b>46,000</b>

# M88 Armored Recovery Vehicle

## ► M88

Type: Armored recovery vehicle

Entered Army service: 1961

Variants in service: M88A1,  
M88A2 Hercules

Specifications: (M88A2)

Length: 28 ft 4 in

Weight: 140,000 lbs

Range: 280 mi

Crew: 3





# M9 ACE

## Armored Earthmover

### ► M9 Ace

Type: Armored earthmover  
Entered Army service: 1986  
Specifications:  
Length: 20 ft 6 in  
Weight: 54,000 lbs  
Range: 200 mi  
Crew: 1



# M93 Fox

## Armored NBC Recon



### ◀ **M-93 Fox**

Type: Armored NBC reconnaissance vehicle

Entered Army service: 1998

Variants in service: XM-93, M-93A1

Specifications: (M-93A1)

Length: 18 ft 8 in

Weight: 40,400 lbs

Range: 500 mi

Crew: 3



# M26 - MLRS



## ◀ *M270 MLRS*

Type: Multiple Launch Rocket System  
Entered Army service: 1983  
Specifications: (Launcher)  
Length: 22 ft 10 in  
Weight: 55,536 lbs  
Average speed: 30 mph  
Max speed: 40 mph  
Range: 300 mi  
Crew: 3



**“Steel Rain”**

# M109 155mm SP Howitzer

## ► M109

Type: Self-propelled howitzer  
Entered Army service: 1963 (M109)  
Variants in service: M109A2/3/5/6  
Specifications: (M109A6)  
Length: 32 ft 2 in  
Weight: 63,300 lbs  
Main gun: M-284 155 mm howitzer  
Crew: 6





# M119 105mm Lightweight Towed Howitzer

**Entered Army Service: 1989**

**Caliber: 105 mm**

**Length: 16 ft**

**Weight: 4,100 lbs**

**Range: 13 mi**



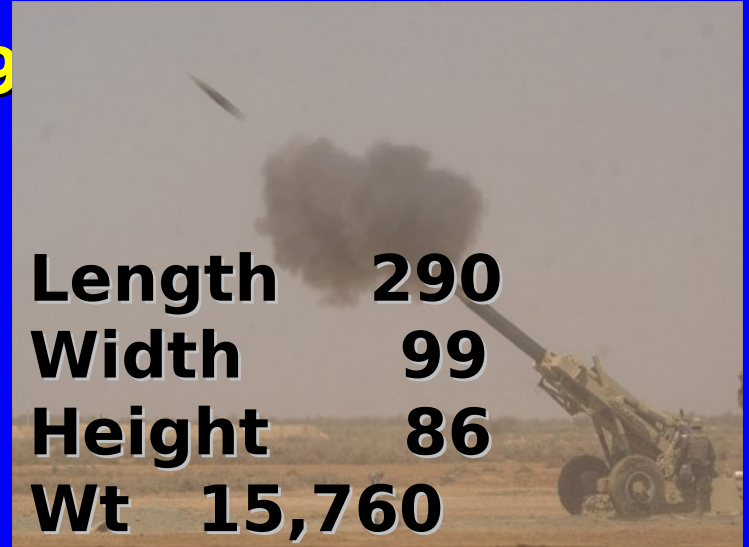
# M198 155mm Medium Towed Howitzer

**Length 290**

**Width 99**

**Height 86**

**Wt 15,760**



# 81mm Mortar



## ◀ *M-252 Mortar*

Type: 81mm mortar

Entered Army service: 1987

Specifications:

Caliber: 81 mm

Barrel length: 4 ft 6 in

Weight: 91 lbs

Range: 5,600 m

Rate of fire: 15 rounds/min sustained

# M-9 Pistol

## ► *M-9 Pistol*

Type: Semiautomatic pistol  
Entered Army service: 1990

Specifications:

Caliber: 9 mm

Length: 217 mm

Barrel length: 125 mm

Weight: 850 g

Range: 50 m





# M-4 Carbine



## ◀ **M-4 Carbine**

Type: Compact assault rifle  
Entered Army Service: 1997  
Specifications:  
Caliber: 5.56 mm  
Weight: 5.65 lbs  
Range: 500 m  
Rate of fire: variable,  
depending on rate selected



# M-16 Rifle

## ► *M-16 Rifle*

Type: Assault rifle  
Entered Army service: 1964  
Variants: M-16A1/A2/A3  
Specifications:  
Caliber: 5.56 mm  
Weight: 7.5 lbs  
Range: 800 m  
Rate of fire: variable, depending on rate selected



# -249 Squad Automatic Weapon (SAW)

## ► M-249 SAW

Type: Squad automatic weapon

Entered Army service: 1987

Specifications:

Caliber: 5.56 mm

Length: 100 cm

Weight: 16.3 lbs

Rate of fire: 750 rounds per minute



# Machine Guns



## ◀ **M-2 Machine Gun**

Type: Heavy machine gun  
Entered Army service: 1938  
Specifications:  
Caliber: .50-caliber  
Length: 61.4 in  
Weight: 84 lbs  
Range: 4.2 mi  
Rate of fire: 550 rounds per minute



## ◀ **M-240B Machine Gun**

Type: Medium machine gun  
Entered Army service: 1997  
Specifications:  
Caliber: 7.62 mm  
Weight: 27.6 lbs  
Range: 1,100 m  
Rate of fire: 200-600 rounds per minute



# MK 19-3 Grenade MG



## ► **MK 19-3 Grenade Machine Gun**

Type: Belt-fed automatic  
grenade launcher

Entered Army service: 1983

Specifications:

Caliber: 40 mm

Weight: 72.5 lbs

Range: 2,200 m

Rate of fire: 60 rounds per minute



# Patriot



## ► **MIM-104 Patriot**

Type: Medium/high altitude  
air-defense missile

Entered Army service: 1985

Specifications:

Length overall: 17 ft 5 in

Weight: 1,534 lbs

Range: 50 mi



# Stinger/Avenger

## ► **M-1097 AVENGER**

Type: Self-propelled anti-aircraft system

Entered Army service: 1989

Weapons: 8 Stinger missiles,  
1 .50-caliber machine gun

Specifications:

Length: 16 ft 3 in

Weight: 8,600 lbs

Crew: 2



## ▲ **FIM-92A Stinger**

Type: Short-range air-defense  
missile

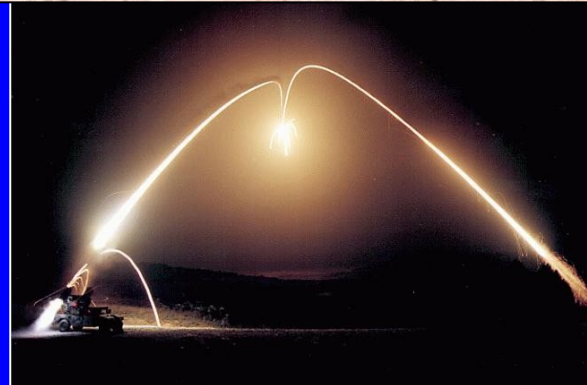
Entered Army service: 1981

Specifications:

Length overall: 60 in

Weight: 34.5 lbs

Range: 3 mi







## ◀ AH-64 Apache

Type: Attack helicopter  
 Entered Army service: 1984  
 Variants in service: AH-64A/D  
 Specifications: (AH-64A)  
 Length: 49 ft 5 in  
 Weight: 17,650 lbs  
 Speed: 232 mph  
 Range: 380 mi  
 Crew: 2

# AH-64 Apache Attack Helicopter

Wingtip	Starboard Wing	Cannon	Port Wing	Wingtip	Max Level Flight Speed (V <sub>H</sub> )	Mission Duration	Mission Range
2 ATAM	4 Hellfire 19 FFAR	1,200 Rounds 30mm	4 Hellfire 19 FFAR	2 ATAM	138 knots	2.68 hours	470 kilometers
MULTI-ROLE MISSION					PERFORMANCE		
Wingtip	Starboard Wing	Cannon	Port Wing	Wingtip	Max Level Flight Speed (V <sub>H</sub> )	Mission Duration	Mission Range
2 ATAM	8 Hellfire	1,200 Rounds 30mm	8 Hellfire	2 ATAM	136 knots	2.67 hours	460 kilometers
CLOSE-SUPPORT MISSION					PERFORMANCE		
Wingtip	Starboard Wing	Cannon	Port Wing	Wingtip	Max Level Flight Speed (V <sub>H</sub> )	Mission Duration	Mission Range
2 ATAM	38 FFAR	1,200 Rounds 30mm	38 FFAR	2 ATAM	140 knots	2.70 hours	485 kilometers
GROUND-SUPPRESSION					PERFORMANCE		

# OH-58 Kiowa Warrior



## ► OH-58 Kiowa

Type: Scout helicopter  
Entered Army service: 1968  
Variants in service:  
OH-58A/B/C/D  
Specifications: (OH-58D)  
Length overall: 40 ft 11 in  
Weight: 4,500 lbs  
Range: 345 mi  
Crew: 1-2







### ◀ **MH-6 Little Bird**

Type: Special operations helicopter

Entered Army service: 1981

Variants in service: AH/MH-6F/G/J

Specifications:

Length overall: 24 ft 7 in

Weight: 3,550 lbs

Range: 340 mi

Crew: 2

# **MH-6 Little Bird SOF Helicopter**





## ◀ **CH-47 Chinook**

Type: Heavy-lift cargo helicopter

Entered Army service: 1962

Variants in service: CH-47C/D,  
MH-47D/E

Specifications: (CH-47D)

Length overall: 51 ft

Weight: 53,500 lbs

Range: 245 mi

Crew: 3

# CH-47 Chinook Cargo Helicopter





# UH-60 Blackhawk Utility Helicopter



## ▲ **UH-60 Black Hawk**

Type: Utility helicopter  
Entered Army service: 1979  
Variants in service: UH-60A/L,  
EH-60C, MH-60K  
Specifications: (UH-60A)  
Length overall: 50 ft  
Weight: 20,250 lbs  
Range: 375 mi  
Crew: 3



## ► C-12 Huron

Type: Utility transport/reconnaissance aircraft  
Entered Army service: 1975  
Variants in service: C-12D/F/R, RC-12D/G/H/K/N/P  
Specifications:  
Length overall: 43 ft 9 in  
Weight: 15,500 lbs  
Range: 1,280 mi  
Crew: 2-4



## ▲ C-20

Type: Staff transport  
Entered Army service: 1983  
Variants in service: C-20C/E  
Specifications:  
Length overall: 83 ft 1 in  
Weight: 69,700 lbs  
Range: 3,650 nm  
Crew: 5

## ► C-23 Sherpa

Type: Medium utility transport aircraft  
Entered Army service: 1985  
Variants in service: C-23A/B/B+  
Specifications:  
Length overall: 58 ft  
Weight: 25,600 lbs  
Range: 1,185 mi  
Crew: 3



## ◄ RC-7

Type: Reconnaissance/surveillance aircraft  
Entered Army service: 1992  
Variants in service: ARL-C, ARL-I, ARL-M  
Specifications:  
Length overall: 80 ft 8 in  
Weight: 26,700 lbs  
Range: 1,500 nm  
Crew: 6

# Trans - Recon



# UH-1 Iroquois Utility Helicopter “Huey”

## ► UH-1 Iroquois

Type: Light utility helicopter

Entered Army service: 1959

Variants in service: UH-1H/1V

Specifications:

Length overall: 44 ft 6 in

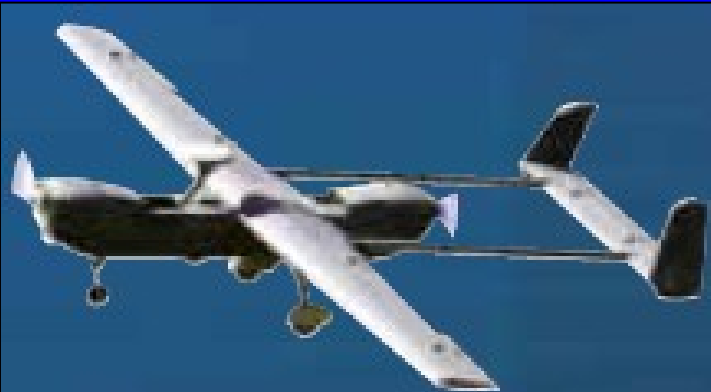
Weight: 9,500 lbs

Range: 300 mi

Crew: 3



# UAV



## ▲ ***Hunter UAV***

Type: Tactical unmanned  
aerial vehicle

Entered Army service: 1994

Specifications:

Length overall: 22 ft 6 in

Weight: 1,600 lbs

Endurance: 8-10 hours

# The Army's "Navy"

## ► LCU-2000

Type: Utility landing craft  
Entered Army service: 1990  
Specifications:  
Length: 174 ft  
Displacement:  
1,087 long tons  
Draft: 9 ft  
Cargo area: 2,500 sq ft  
Range: 6,500 nm  
Crew: 13



## ► LSV

Type: Logistical support vessel  
Entered Army service: 1988  
Specifications:  
Length: 273 ft  
Displacement: 4,199 long tons  
Draft: 12 ft  
Cargo area: 10,500 sq ft  
Range: 8,358 nm  
Crew: 30



## ► Large Tug

Type: Ocean-going tug  
Entered Army service: 1994  
Specifications:  
Length: 128 ft  
Displacement: 1,057 long tons  
Draft: 17 ft  
Range: 5,000 nm  
Crew: 18

